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## TREATMENT OF SYCOSIS BY THE X-RAY

By HOWARD FOX, M.D.,

Clinical Assistant, Dermatological Department, College of Physicians and Surgeons; Clinical Assistant, Skin and Cancer Hospital.

There are a few skin diseases, and only a few, in the writer's opinion, in which the X-ray is to be preferred to all other therapeutic measures. The X-ray seems especially indicated in affections where epilation is desired, such as ringworm, favus and sycosis. It has certainly proved an exceptionally valuable agent in sycosis, a disease so often intractable to all other methods of treatment.

The case which forms the basis of this report was a very obstinate one of sycosis of 10 years' duration, which the writer recently presented before the dermatological section of the Academy of Medicine. The patient is 33 years old, married, born in the United States, a clerk by occupation. He suffered from measles and scarlet fever as a child. Since the attack of scarlet fever the eyelids have always been more or less red and inflamed. With the exception of the diseases of childhood above mentioned, the patient's general health has always been excellent.

The eruption first appeared 10 years ago upon the chin. It then gradually spread upon the left side of the cheek and neck, and within six months had attained its maximum development. In another six months it had spread upon the opposite side of the cheek and neck until the two sides were practically symmetrical in appearance. For the following seven years the eruption varied in intensity, being at times so severe that shaving was impossible. At other times the patient was able to shave twice a week with comparative ease. The actual discomfort which the patient has suffered, though at times severe, has been small in comparison with the mental depression caused by the unsightliness of the disease. The patient has often felt himself socially ostracized on account of his affliction. The subjective symptoms have consisted of burning and stinging, especially severe after shaving. Three years ago, during a second attack of measles, the eruption disappeared completely for three weeks and then

relapsed to its former condition. With the exception of this short interval the lesions never completely disappeared till X-ray treatment was begun.

Two years ago the patient consulted an experienced and well-known radiologist of this city. He was given 28 exposures of the X-ray within a period of four and a half weeks. At the end of this time a brilliant result had apparently been achieved. The hairs of the affected area had fallen and the skin appeared white and smooth. Two weeks later, on account of a slight relapse, the physician was again consulted. A second course of X-ray treatment was begun, consisting of two to three exposures a week for a period of six weeks. At the end of this time the eruption had become much worse than it had ever been before. It had spread down upon the neck so far that a low collar could not be worn with comfort. The eruption on the cheeks had extended and a few new lesions had appeared upon the lips. The patient then gave up the X-ray in despair and returned to the other methods of treatment that he had formerly used, namely, epilation and various ointments and lotions. The lesions were even curetted a number of times. Nothing but temporary improvement, however, ever resulted from any of these procedures.

A year ago, after having previously treated the patient for a few weeks with ointments, I decided to give the X-ray one more trial, being firmly convinced of its usefulness in sycosis. I had some hesitation, however, in again trying the means that in the hands of my experienced colleague had apparently failed. The patient was given two treatments a week for the first two weeks. Since that time the intervals between the treatments have varied from 10 days to three weeks, the patient having been of necessity somewhat irregular in his visits. In all about 30 exposures have been given. A high tube has been used giving a spark gap of light to 10 centimeters on a static machine.

The tube distance has averaged 16 to 18 centimeters, and the exposures have lasted from 6 to 10 minutes.

The progress during the past year has been a steady improvement, with partial relapses from time to time. The eruption has now finally disappeared upon the cheeks and neck. The skin is bronzed by the X-ray and the beard appears to be permanently epilated. Recently

that all other methods completely failed to accomplish any permanent result.

The first cases of sycosis treated by the X-ray were reported in 1899 by Freund and Schiff. These writers considered that the hairs acted as foreign bodies and that their removal would eliminate the inflammatory process in the follicles. As a matter of fact, they found that after epilation no new pustules appeared. It was



SYCOSIS OF TEN YEARS' DURATION BEFORE X-RAY TREATMENT.

some new lesions have appeared upon the upper lip (only slightly rayed). With this exception the eruption can be said to be practically cured. Treatment of the lip will be continued to the point of permanent epilation, and for a time occasional exposures will be given to the cheeks and neck, that now appear to be healthy. While it has taken a long time to effect a cure in this case by the X-ray, it must be admitted

also observed that before the hairs fell the acute inflammatory symptoms lessened and the infiltrated areas flattened and disappeared. At the same time the subjective symptoms abated. Their method did not require a dermatitis to produce results. As soon as a reaction appeared the treatment was stopped. After 7 to 11 sittings the hairs loosened and fell, and in 10 to 12 days all redness had disappeared.

Since the pioneer work of Freund and Schiff a large number of cases of sycosis have been treated successfully by the X-ray. Allen, who has treated 23 cases, almost all of long standing, says: "The results have been for the most part prompt and excellent, and in a few astonishing." Pusey says: "From a considerable experience in the treatment of sycosis with Röntgen therapy, I can recommend it strongly.

The management of the cases depends largely upon their chronicity. In the more acute cases a temporary epilation is alone required. It is always advisable to proceed with caution, as at times an unexpectedly severe dermatitis makes its appearance. In these cases it is important, as Holzknecht and others suggest, to keep the beard closely shaven for a year following X-ray treatment. In the extremely ob-



AFTER X-RAY TREATMENT.

The cases yield much more readily than from any other method." Stern in a recent report says: "The results accomplished in comparison with other methods are simply marvelous. I have repeatedly seen cases of five years' standing, involving almost all the hair follicles of the face, cured in six weeks' treatment. We have treated 105 of these cases, with almost 100 per cent. cures."

stinate and chronic cases it is often necessary that the beard be permanently epilated in order to obtain a lasting cure. Where a chronic rhinitis is the cause of a sycosis of the upper lip it should receive appropriate treatment. At times permanent epilation is necessary to effect a cure. Schmidt says that in recurring cases of sycosis a long-continued intermittent treatment must be given, in which an atrophic con-

dition of the skin and telangiectases are inevitable. Even were this condition inevitable, it would be preferable in many cases to the more disfiguring original disease.

In 1901 Freund had already succeeded in curing 17 cases of sycosis. Successful results in cases of less than a year's duration are reported by Pusey and Cauldwell, Spiegler, Gaston and Nicolau. Excellent results were obtained by Török and Schein in two cases of two to three years' duration. Of two cases reported by Kienböck, one received an X-ray burn which was later followed by telangiectases. This condition was, however, preferred to the more disfiguring sycosis. Fleig reports four cases. One of them of seven years' standing was improved by treatment. Cases of two to four years' duration were successfully treated by Belot. Zeisler reports four successful cases, one of two and one of four years' duration.

After six treatments a case that had lasted five years was cured by Morton. Stopford Taylor reports a case of five years' standing cured after two and a quarter hours of total treatment. Gottschalk reports three cases of three, seven and eight years' duration, respectively, that were successfully treated. Gassmann and Schenkel cured a case of 13 years' standing after nine treatments. Eight months later there had been no relapse. Hahn and Albers-Schönberg succeeded in finally curing a case of sycosis of the upper lip of 30 years' standing. There were later several relapses, which were cured by iodine. Successful results are also reported by Grouven, Lancashire, Lion, Rinehart and Williams.

In conclusion, I would say that for the more acute cases of sycosis the X-ray is the best therapeutic agent at our command; for the extremely chronic and obstinate cases it is the *only* reliable means of treatment.

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